

IN THE CLAIMS:

Please amend claims 1, 8-11, 14-15, 17-31, and 33 and add new claim 34 as follows.

1. (Currently Amended) A radio resource control method in a mobile communication system, ~~comprising a serving cell formed by a serving base station, at least one neighbour cell formed by a neighbour base station, and user equipment capable of receiving signals from said base stations, the method comprising:~~

camping, in an idle state, on ~~the~~ a serving cell formed by a base station;

receiving, in the user equipment, control information for controlling cell change procedures of the user equipment, said cell change being conducted from the serving cell to a target cell; and

performing, in the user equipment, the cell change procedures based on the received control information;

adjusting, before the control information is received, at least one element of said control information according to a predetermined time pattern, thus forming adjusted control information; and

controlling the cell change procedures based on said adjusted control information, wherein at least one neighbour cell is formed by a neighbour base station and the user equipment capable of receiving signals from said base stations.

2. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the idle state control information.

3. (Previously Presented) The method of claim 1, wherein performing the cell change procedures comprises:

selecting the target cell based on the adjusted control information; and
camping on the target cell.

4. (Previously Presented) The method of claim 1, wherein performing the cell change procedures comprises:

measuring the quality of the serving cell;
measuring the quality of at least one neighbour cell;
ranking the measured cells based on the measured quality of the serving cell and the measured quality of the neighbour cell; and
selecting the target cell based on the ranking.

5. (Previously Presented) The method of claim 1, further comprising adjusting at least one quality threshold of the serving cell; and

wherein performing the cell change procedures comprises:
measuring the quality of the serving cell;

triggering measurements on the neighbour cell based on the measured quality of the serving cell and the quality threshold of the serving cell; and
selecting the target cell based on the triggered measurements.

6. (Previously Presented) The method of claim 1, further comprising:
camping on the serving cell that uses a different carrier frequency from that used by the neighbour cell;
adjusting at least one inter-frequency measurement threshold; and
wherein performing the cell change procedures comprises:
measuring the quality of the serving cell;
triggering inter-frequency measurements on the neighbour cell based on the measured quality of the serving cell and the inter-frequency measurement threshold; and
selecting the target cell based on the inter-frequency measurement.

7. (Previously Presented) The method of claim 1, further comprising:
camping on the serving cell that uses a different radio-access technology from that used by the neighbour cell;
adjusting an inter-radio access technology measurement threshold; and
wherein performing the cell change procedures comprises:
measuring the quality of the serving cell;

triggering inter-radio access technology measurements on the neighbour cell based on the measured quality of the serving cell and the inter-radio access technology measurement threshold; and

selecting the target cell based on the inter-radio access technology measurement.

8. (Currently Amended) The method of claim 1, further comprising adjusting at least one quality threshold of the neighbour cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

triggering measurements on the neighbour cell based on the measured quality of the serving cell;

measuring the quality of the neighbour cell;

forming the candidate cell selection based on the measured quality of the neighbour cell and the quality threshold of the neighbour cell; and

selecting the target cell based on the candidate cell selection.

9. (Currently Amended) The method of claim 1, further comprising adjusting at least one quality offset of the serving cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

applying the quality offset of the serving cell to the measured quality of the serving cell, thus obtaining an offset-applied quality of the serving cell;

measuring the quality of at least one neighbour cell; and

selecting the target cell based on the measured quality of the neighbour cell, and the offset-applied quality of the serving cell.

10. (Currently Amended) The method of claim 1, further comprising adjusting at least one quality offset of the neighbour cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

measuring the quality of at least one neighbour cell;

applying the quality offset of the neighbour cell to the measured quality of the neighbour cell, thus obtaining an offset-applied quality of the neighbour cell; and

selecting the target cell based on the measured quality of the serving cell and the offset-applied quality of the neighbour cell.

11. (Currently Amended) The method of claim 1, further comprising adjusting at least one temporary quality offset of the neighbour cell and a penalty time of the neighbour cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

measuring quality of at least one neighbour cell;

applying the quality offset of the neighbour cell to the measured quality of the neighbour cell for the duration of the penalty time, thus obtaining a temporary offset-applied quality of the neighbour cell~~(320)~~; and

selecting ~~(850)~~ the target cell based on the measured quality of the serving cell and the temporary offset-applied quality of the neighbour cell.

12. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the control information to assumed capacity requirements of the mobile communication system.

13. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the control information based on assumed cell load of the serving cell.

14. (Currently Amended) The method of claim 1, further comprising:
camping, on the serving cell belonging to the same hierarchical cell structure as the neighbour cell;

adjusting the prioritising information of hierarchical cell structure ~~200~~;
re-prioritising the cells ~~210 to 270~~ in a hierarchical cell structure ~~200~~ using the
adjusted prioritising information; and
performing the cell change procedures based on the re-prioritising information.

15. (Currently Amended) The method of claim 1, further comprising camping in one of the following idle states specified in ~~the 3GPP~~ third generation partnership project specifications: idle mode, CELL_FACH state, URA_PCH state, CELL_PCH state.

16. (Previously Presented) The method of claim 1, further comprising camping on the serving cell controlled by a base station controller different from the base station controller controlling the neighbour cell.

17. (Currently Amended) A mobile communication system, comprising:
a network part for providing the fixed infrastructure of the mobile communication system,
the network part comprising a serving base station for forming a serving cell and a neighbour base station for forming a neighbour cell;
a user equipment comprising a receiving means ~~device configured to for receive~~
ing signals from the serving base station and from the neighbour base station;

the network part further comprises a control means for device configured to controlling cell change procedures with control information, said cell change being conducted from the serving cell to a target cell;

the user equipment further comprising a cell change procedure means for device configured to performing cell change procedures based on control information received from the network part;

wherein the receiving ~~means device~~ and the cell change procedure means device are configured to camp on the serving cell in an idle state; and

wherein the network part further comprises an adjusting device configured to ~~means for adjust ing~~ at least one element of said control information according to a predetermined time pattern, thus forming adjusted control information.

18. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means device is~~ are configured to adjust at least one element of the idle state control information.

19. (Currently Amended) The mobile communication system of claim 17, wherein the cell change procedure ~~means device is~~ are configured to select the target cell based on the adjusted control information; and

wherein the receiving ~~means device~~ and the cell change procedure ~~means device~~ are configured to camp on the target cell.

20. (Currently Amended) The mobile communication system of claim 17, wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure the quality of the serving cell based on the adjusted control information;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure the quality of at least one neighbour cell based on the adjusted control information;

wherein the cell change procedure ~~means-device~~ are configured to rank the measured cells based on the measured quality of the serving cell, the measured quality of the neighbour cell, and the adjusted control information; and

wherein the cell change procedure ~~means-device~~ ~~is~~ are configured to select the target cell based on the ranking.

21. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means-device is~~ are configured to adjust at least one quality threshold of the serving cell;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure the quality of the serving cell;

wherein the cell change procedure ~~means-device is~~ are configured to trigger measurements on the neighbour cell based on the measured quality of the serving cell and the quality threshold of the serving cell; and

wherein the cell change procedure ~~means-device is~~ are configured to select the target cell based on the triggered measurements.

22. (Currently Amended) The mobile communication system of claim 17, wherein the receiving ~~means-device is~~ are configured to operate at different carrier frequencies;

wherein the adjusting means are configured to adjust at least one inter-frequency measurement threshold;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to perform inter-frequency measurements; and

wherein the cell change procedure ~~means-device is~~ are configured to select the target cell based on the inter-frequency measurements.

23. (Currently Amended) The mobile communication system of claim 17, wherein the receiving ~~means-device is~~ are configured to operate with different radio access technologies; and

wherein the adjusting ~~means-device is~~ are configured to adjust at least one inter-radio access technology measurement threshold;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to perform inter-radio access technology measurements; and

wherein the cell change procedure ~~means-device is~~ are configured to select the target cell based on the inter-radio access technology measurements.

24. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means-aredevice is~~ is configured to adjust at least one quality threshold of the neighbour cell;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure quality of the serving cell;

wherein the cell change procedure ~~means-device is~~ are configured to trigger measurements on the neighbour cell based on the measured quality of the serving cell;

wherein the cell change procedure ~~means-device~~ and the receiving ~~means-device~~ are configured to measure the quality of the neighbour cell;

wherein the cell change procedure ~~means-device is~~ are configured to form the candidate cell selection based on the measured quality of the neighbour cell and the quality threshold of the neighbour cell; and

wherein the cell change procedure ~~means-aredevice is~~ is configured to select the target cell based on the candidate cell selection.

25. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means-are~~device is configured to adjust at least one quality offset of the serving cell;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure the quality of the serving cell;

wherein the cell change procedure ~~means-are~~device are configured to apply the quality offset of the serving cell to the measured quality of the serving cell, thus producing an offset-applied quality of the serving cell;

wherein the cell change procedure ~~means-device~~ and the receiving ~~means-device~~ are configured to measure the quality of at least one neighbour cell; and

wherein the cell change procedure ~~means-are~~device is configured to select the target cell based on the measured quality of the neighbour cell, and the offset-applied quality of the serving cell.

26. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means-are~~device is configured to adjust at least one quality offset of the neighbour cell;

wherein the receiving ~~means-device~~ and the cell change procedure ~~means-device~~ are configured to measure the quality of the serving cell;

wherein the cell change procedure ~~means-device~~ and the receiving ~~means-device~~ are configured to measure the quality of at least one neighbour cell;

wherein the cell change procedure ~~means-are~~device is configured to apply the quality offset of the neighbour cell to the measured quality of the neighbour cell, thus producing an offset-applied quality of the neighbour cell; and

wherein the cell change procedure ~~means-are~~device is configured to select the target cell based on the measured quality of the serving cell, and the offset-applied quality of the neighbour cell.

27. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means-are~~device is configured to adjust at least one temporary quality offset of the neighbour cell and a penalty time of the neighbour cell;

wherein the receiving ~~means-~~device and the cell change procedure ~~means-~~device are configured to measure the quality of the serving cell;

wherein the cell change procedure ~~means-~~device and the receiving ~~means-~~device are configured to measure the quality of at least one neighbour cell;

wherein the cell change procedure ~~means-are~~device is configured to apply the quality offset of the neighbour cell for the duration of the penalty time to the measured quality of the neighbour cell, thus producing a temporary offset-applied quality of the neighbour cell; and

wherein the cell change procedure ~~means-are~~device is configured to select the target cell based on the measured quality of the serving cell, and the temporary offset-applied quality of the neighbour cell.

28. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means are~~device is configured to adjust at least one element of the control information to assumed capacity requirements of the mobile communication system.

29. (Currently Amended) The mobile communication system of claim 17, wherein the adjusting ~~means are~~device is configured to adjust at least one element of the control information based on an assumed cell load in the serving cell.

30. (Currently Amended) The mobile communication system of claim 17, wherein the serving base station and the neighbour base station are configured to form a hierarchical cell structure such that the serving cell and the neighbour cell belong to the same hierarchical cell structure;

wherein the adjusting ~~means~~device is ~~are~~ configured to adjust the prioritising information;

wherein the control ~~means are~~device is configured to re-prioritise the serving cell and the neighbour cell based on the adjusted prioritising information; and

wherein the cell change procedure ~~means are~~device is configured to perform the cell change procedures based on the re-prioritising.

31. (Currently Amended) The mobile communication system of claim 17, wherein the receiving ~~means~~device and cell change procedure ~~means~~device are configured to camp on the serving cell in one of the following idle states specified in the ~~3GPP~~third generation partnership project specifications: idle mode, CELL_FACH state, URA_PCH state, CELL_PCH state.

32. (Previously Presented) The mobile communication system of claim 17, wherein the network part comprises separate base station controllers for the serving base station and the neighbour base station.

33. (Currently Amended) A network element of a mobile communication system, which comprises:

- a serving base station ~~for forming~~configured to form a serving cell;
- a neighbour base station ~~for forming~~configured to form a neighbour cell; and
- a user equipment camped on the serving cell in an idle state and comprising a receiving ~~means for receiving~~device configured to receive signals from the serving base station and from the neighbour base station, the user equipment further comprising a cell change procedure ~~means for performing~~device configured to perform cell change procedures based on control information; and a control ~~means for controlling~~device configured to control cell change procedures with control information, said cell change being conducted from the serving cell to a target cell, the network element further

comprising an adjusting means for adjusting device configured to adjust at least one element of said control information according to a predetermined time pattern, thus forming adjusted control information.

34. (New) A mobile communication system, comprising:

a network part for providing the fixed infrastructure of the mobile communication system,

the network part comprising a serving base station for forming a serving cell and a neighbour base station for forming a neighbour cell;

a user equipment comprising receiving means for receiving signals from the serving base station and from the neighbour base station;

the network part further comprises control means for controlling cell change procedures with control information, said cell change being conducted from the serving cell to a target cell;

the user equipment further comprising cell change procedure means for performing cell change procedures based on control information received from the network part;

wherein the receiving means and cell change procedure means are configured to camp on the serving cell in an idle state; and

wherein the network part further comprises adjusting means for adjusting at least one element of said control information according to a predetermined time pattern, thus forming adjusted control information.